

Claims

What is claimed is:

1. A method of managing a locked resource in a distributed environment, the method comprising:

receiving a request to access the resource, wherein the request originates from a requesting client computer system;

5 determining whether the resource has a conflicting lock;

if the resource has a conflicting lock, returning lock information to the requesting client computer system, so that the retry strategy of the requesting client computer system may be modified;

if the resource does not have a conflicting lock, performing the requested access.

2. A method as defined in claim 1 wherein the lock information is related to expected lifetime of the lock.

3. A method as defined in claim 2 wherein the lock owner sets the expected lifetime of the lock.

4. A method as defined in claim 2 wherein the requesting client computer system modifies a request strategy based on the returned information.

5. A method as defined in claim 4 wherein the search strategy relates to the time period between requests for the resource.

6. A method as defined in claim 1 wherein the lock property relates to the sharing property values of the lock.

7. A method as defined in claim 6 wherein the search strategy relates to the type of request.

8. A computer program product readable by a computer and encoding instructions for executing the method recited in claim 1.

9. A computer program product readable by a computer and encoding instructions for executing the method recited in claim 5.

10. A computer-readable medium having stored thereon a locked resource, wherein the locked resource comprises:

a resource object data section for storing actual object data; and

a lock object, wherein the lock object may comprise an expected lifetime property.

11. A method of allocating access to a resource in a distributed environment, the method comprising:

receiving a request to access the resource, wherein the request originates from a requesting client computer system;

determining whether the resource has a conflicting lock;

if the resource has a conflicting lock, blocking the resource for the requesting client computer system until the resource is free; and

performing the requested access, allocating a new lock to the requesting computer system.

12. A method as defined in claim 11 wherein the request for access to the resource further comprises a request to block the resource.

13. A method as defined in claim 12 wherein the request to block the resource is a predetermined header having a time value for defining a time period to block the resource.

14. A method of unlocking a locked resource in a distributed environment, the locked resource having a lock object associated with a lock owner, the method comprising:

receiving a request to access the locked resource, wherein the request originates from a requesting client computer system other than the lock owner and wherein the

5 request comprises a request to break the lock object;

identifying the request to break the lock object;

determining whether the requesting client computer system is cleared to break the lock object; and

10 removing the lock object from the resource if the requesting client computer system is cleared to break the lock object.

15. A method as defined in claim 14 further comprising:

notifying the lock owner that the lock object of the request to break the lock before removing the lock object.

16. A method as defined in claim 15 wherein the lock object is not removed for a predetermined time following notifying the lock owner of the request to break the lock.

17. A method as defined in claim 15 wherein the lock object has a timeout property value and the timeout property value is modified to effectively remove the lock object.

18. A computer program product readable by a computer and encoding instructions for executing the method recited in claim 14.

19. A system for managing resources in a distributed environment, the distributed environment having a plurality of resources and wherein at least one resource is associated with a lock object, the system comprising:

a receive module for receiving a request from a requesting client application

5 program to access at least one resource in the distributed environment;

a determination module for determining whether the resource has a conflicting
lock object associated with the requested resource; and

a communication module for returning lock information to the client application
program if the resource has a conflicting lock.

20. A system as defined in claim 19 wherein:

an owning client application program owns a lock object for the requested
resource;

5 the lock information returned to the requesting client application program relates
to the expected lifetime of the lock; and

the owning client application program determines the expected lifetime of the
lock object.

21. A system as defined in claim 20 wherein the requesting client application program
modifies a request strategy based on received information from the communication
module.

22. A system as defined in claim 19 further comprising:

a blocking module for blocking the locked resource for the requesting client
application program until the resource is released; and

5 an allocation module for allocating a new lock to the requesting client application
program following the release of the resource.

23. A system as defined in claim 22 wherein the requesting client application program
requests to block the resource when requesting access to the resource.

